1937 Index — Electrical Engineering and Transactions

This multientry annual reference index covers comprehensively the entire text content of the 12 issues of ELECTRICAL ENGINEERING published during 1937 and the identical content of the 1937 AIEE TRANSACTIONS, volume 56; the index covers also a supplement of 28 pages published in the TRANSACTIONS, which contains the following two papers not published in ELECTRICAL ENGINEERING:

1. FUNDAMENTAL CONCEPTS OF SYNCHRONOUS MACHINE REACTANCES, by B. R. Prentice (pages 1–21 of supplement).

2. PER-UNIT QUANTITIES, by Irven Travis (pages 22–8 of supplement).

A special effort has been made to provide effective correlation between references to technical papers and all published discussions of those papers. Discussions of many technical papers published during the latter part of 1936 were published in the early part of 1937, and hence appear in this current index. Likewise, many discussions of the later 1937 papers will be published early in 1938, and consequently will not be found among the references contained in this current index.

For convenience in use, this index is subdivided into the following general sections:

1. Technical subjects.
2. Authors, including the writers of discussions.
3. News items pertaining to Institute activities.
4. News items of a general nature.
5. Biographical (personal and obituary) items.

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Preface

This, the fifty-sixth volume of the TRANSACTIONS of the American Institute of Electrical Engineers, includes the entire text content of the 12 monthly issues of ELECTRICAL ENGINEERING published during 1937 and a 28-page supplement, immediately preceding the index, which contains two papers not published in ELECTRICAL ENGINEERING.

Fourth in the series of annual volumes initiated under the Institute's unified publication plan, which became effective January 1, 1934, this is the last to be published under that plan. Certain changes in publication policy, approved by the Institute's board of directors October 28, 1937, will become effective January 1, 1938, and consequently will be reflected in the 1938 TRANSACTIONS; these changes in publication policy are outlined on page 1409 of this volume.

Discussions of technical papers, printed in ELECTRICAL ENGINEERING from month to month as they became available, are thoroughly correlated in the comprehensive multientry annual reference index which begins on page 1537 of this volume, immediately following the 28-page supplement. A reference to any of the several subject entries for any technical paper will lead directly to any discussion on that paper that may have been published during 1937. It is of importance to note: first, that, of 1936 papers, this volume contains all discussions published after December 1936; second, that, likewise, the discussions of many of the later 1937 papers will appear in the 1938 TRANSACTIONS.

Errata

1. Page 60, figure 2*a*, capacitance between surfaces of shell should be indicated as C'.

2. Page 65, figure 14, first solid line from bottom should indicate power; second solid line from bottom should indicate power factor.

3. Page 97, figure 11, reproduction correct on page 204.

4. Page 168, first column, lines 16–18 should read: The relation between voltage breakdown (V/V_0) and oil gap spacings (d/d_0) for these curves is closely expressed by $\log (V/V_0) = 0.5 \log (d/d_0)$.

5. Page 170, first column, lines 16–18 should read: The relation between voltage strength (V/V_0) and thickness (d/d_0) over the greater range of the 2 curves for fullerboard is expressed by $\log (V/V_0) = 0.6$ to $0.7 \log (d/d_0)$.

6. Page 334, nomenclature should give $\mathcal{P} = 3.192 \dfrac{A}{\delta}$

7. Page 557, table I, should give the following values for 13.8-kv lines:

Line	Length Line	No. Gaps	No. Structures	Structures With Gaps
13,852 13,883	0.62	90 Ph. 8 Gr.	98	15
13,887 13,888	3.38	426 Ph. 71 Gr.	150	71
13,860 13,861	3.46	240 Ph. 40 Gr.	161	40

8. Page 615, equations 10 should read:

$$P(s) = V_k(s) \qquad I^k(s) = \hat{V}_m(s) \cdot I_m(s)$$

9. Page 622, figure 4, equations in subcaption should read:

$$I_q = \frac{E_q s_1}{\sqrt{r_q^2 + x_q^2 s_1^2}}$$

and

$$I_q = \frac{E_q}{\sqrt{(r_q^2/s_1^2) + x_q^2}}$$

10. Page 1004, equation 1 should read:

$$E_s = E_r \cosh \beta x + I_r Z_0 \sinh \beta x$$

11. Page 1005, equation 5 should read:

$$Z_s = Z_0 \left(\frac{\alpha x}{\cos^2 \beta x} + j \tan \beta x \right) = Z_0 \tan \beta x \left(\frac{Rx}{Z_0 \sin 2\beta x} + j\, 1.0 \right)$$

12. Page 1006, equation 8 should read:

$$R' = \frac{84 \sqrt{f}\, 10^{-9}}{r \sqrt{1 - \left(\frac{2r}{D}\right)^2}} = \frac{0.01455}{\sqrt{\lambda}\, r \sqrt{1 - \left(\frac{2r}{D}\right)^2}}$$

13. Page 1009, fourth line following equation 40, z_0 should be Z_0.